

OZONE WORKING GROUP – May 14, 2003

Comments from the May 14, 2003 OWG meeting and staff responses.

Concern that Bay Area may not be VOC-limited

Response: All modeling and other analyses conducted for the Bay Area over the past 20 years has shown that the Bay Area is VOC-limited. This means that reducing VOC emissions is the most effective strategy for reducing ozone levels in the Bay Area. The current modeling effort using Central California Ozone Study field data and a state-of-the-art modeling system will also examine whether the Bay Area is VOC-limited or NO_x-limited. We hope to have preliminary modeling results by the end of September 2003. In the meantime, our control measure evaluation process is examining both VOC and NO_x reduction measures for possible inclusion in the Clean Air Plan and/or the Ozone Attainment Strategy.

District should look at multiple benefits of reducing emissions, e.g. NO_x reductions affect PM as well as ozone levels

Response: District regulations and programs that are focused on attaining ozone standards may have other benefits, e.g. reducing PM levels. The air quality planning process in the Bay Area currently focuses on one pollutant – ozone. In terms of national standards, the only pollutant for which the Bay Area is nonattainment is the 1-hour ozone standard, so the only planning requirement is for that standard. The Bay Area is nonattainment for the California 1- hour ozone standard and the PM₁₀ standards. Currently, the California Clean Air Act includes a planning requirement for ozone, but does not include a requirement for particulate matter planning. For this round of air quality planning, the Clean Air Plan and Ozone Attainment Strategy will focus on achieving the ozone standards. Emission reductions identified in this process to help the region attain the ozone standards will likely help the region reduce PM levels. Requirements for particulate matter planning (state and/or federal) may apply to the Bay Area in the future. Also, the District reduces PM emissions through stationary source permits that limit PM emissions and programs to reduce woodburning. MTC is funding particulate filters on public buses.

NO_x and VOC controls are needed in Bay Area to help achieve ozone attainment in the Sacramento air basin

Response: The ozone modeling project that is currently underway will provide information useful in identifying the type and level of emission reductions needed in the Bay Area to mitigate the impact of Bay Area pollution sources on ozone concentrations in the Sacramento air basin.

MTC TCM evaluation criterion requiring consistency with current law is new

Response: The evaluation criterion basically relates to the issue of whether an agency has authority to implement and enforce a TCM. The same criterion was used in the Reasonably Available Control Measure analysis for the 2001 Ozone Attainment Plan explicitly considered this factor (see column labeled “Authority to implement measure?”). Lack of clearly identified authority to implement and enforce a TCM creates key issues for regulatory agencies who must approve the Plan. While there may be legislative or other means to obtain new authority, there are important considerations in taking this path: 1) the time it would take to actually obtain new legislation (given the 2006 attainment date), 2) the potential for opposition given the legislative history on the topic or known sentiments of the State Legislature and affected parties, 3) the lack of well defined emission benefits (in some cases) which will raise issues in the legislative process, and 4) the extraordinary effort it takes to pursue new legislation relative to other types of emission control measures that are as or more effective. These types of issues relate to other RACM criteria, as well, such as whether or not a proposed TCM will expedite attainment or the de minimis criteria, that considers the amount and levels of reductions in comparison to agency resources required to guarantee emission benefits.

Concern that emission reduction target not set yet (extensive work to identify potential control measures when you don’t even know the goal yet)

Response: Staff would much rather have the modeling work completed and the emission reduction target known prior to beginning the control measure evaluation work. However, because we have a near-term deadline for submitting updates to the ozone plans, we do not have the luxury of waiting for the emission reduction targets to be set before initiating the control measure evaluation process. Work to identify potential control measures is proceeding. Once emission reduction targets are set and the evaluation of suggested measures is completed, we can select viable measures for inclusion in the control strategy of the Clean Air Plan and/or the Ozone Attainment Strategy.

Modeling should include airports

Response: The emission inventory for this planning process will include emissions from sources at airports, including aircraft operations (taxiing, takeoff, landing), ground service equipment, airport access, fueling and other sources.

Maintain list of control measures under consideration

Response: The District has compiled and will evaluate suggested stationary, area and mobile source control measures. MTC has compiled and will evaluate suggested transportation control measures. The measures under evaluation include suggestions from the public, as well as ideas proposed by agency staff and rules and programs from other air quality districts. We will discuss the evaluations with the OWG at the August and October meetings. For the August meeting, the District will provide four lists: (1) suggested measures already implemented, (2) suggested measures that do not pass the evaluation criteria, (3) suggested measures that are still under evaluation, and (4) suggested measures that have passed the evaluation criteria. After the August meeting, District staff hope to post to the website (and then update periodically) a list of all suggestions and the status/outcome of the evaluation.

Enhance MTC's travel demand model:

- properly capture pedestrian trips
- properly capture short trips (e.g. cold starts)
- consider parking availability
- consider how density affects trip generation
- include land use feedback loop to quantify smart growth and smart transportation investment

Response:

1. Properly capture pedestrian trips. MTC's travel demand models properly include walk trips as explicit alternatives in all seven mode choice models. Zone-to-zone walk travel times are included in all mode choice models. In addition, walk trip shares are influenced by employment density (work trips), zero-vehicle households (shopping trips) and overall density (non-home-based trips). Intrazonal bicycle and walk trips are also forecasted using the same variables, but adjusted for shorter intrazonal travel times.

2. Properly capture short trips (e.g., cold starts). MTC's travel demand models properly include short trips. These trips are typically intra-zonal trips that are

never assigned to highway networks, but are still evaluated in terms of transportation and environmental impacts.

3. Consider parking availability. MTC's travel demand models handle parking availability indirectly by using zonal average parking cost as a mechanism to reduce demand to not exceed parking supply. This is very important in evaluating work trip parking demand and supply in downtown areas like San Francisco. In addition, parking supply at transit park-and-ride lots is handled by adjusting transit networks to not overload parking facilities.

4. Consider how density affects trip generation. MTC's work trip and shopping trip generation models explicitly include density variables. For the other trip purposes MTC staff estimated and validated models with and without density variables, and the best models, as chosen, did not include density variables. The simplest trip generation models are for school trips, where MTC staff chose simple "trip rate" models (school trips per student.) Density variables were more important in older versions of MTC trip generation models, which excluded bicycle and walk trips. Density variables are also included in all of MTC's mode choice models.

5. Include land use feedback loop to quantify smart growth and smart transportation investment. MTC's transportation models and ABAG's land use allocation models currently include a feedback loop from transportation-to-land use. MTC provides ABAG a set of 119 district-to-district travel times as input to their land use allocation model POLIS. MTC will provide ABAG a similar set of travel times, output from the Smart Growth/Projections 2003-based forecasts, as input to POLIS for preparing the subsequent Projections 2005. Changes and improvements to the POLIS model for allocation of future population and employment are made by ABAG on a continuing basis.